

9.3 Taylor series with remainder

What is the fifth order Maclaurin series for $f(x)=\sin(x)$? What is the maximum error when approximating $\sin(x)$ on $[-\pi, \pi]$
Solve graphically and numerically

Jan 31-5:30 PM

How many terms are needed in the Maclaurin series for $\sin(x)$ in order to approximate $\sin(x)$ within .0001 on the interval

Jan 31-6:00 PM

On what interval does the third order Maclaurin series approximate $\sin(x)$ within .01?

Jan 31-6:02 PM

Taylor's Remainder Estimation Theorem

Jan 31-6:03 PM

The approximation $\ln(1+x) \approx x - \frac{x^2}{2}$ is used when x is small.

Use the Remainder Estimation Theorem to get a bound for the maximum error when $|x| \leq .01$. Support the answer graphically.

Jan 31-6:07 PM